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(54) **Amine derivatives of anthracycline antibiotics and antibody conjugates thereof.**

EP 0 294 294 A3
 (57) Novel antineoplastic amine-containing derivatives and methods for synthesizing such derivatives of anthracycline antibiotics are disclosed. The derivatives are useful to prepare site-selectively attached therapeutic antibody-anthracycline antibiotic conjugates which retain substantial immunospecificity of the unconjugated antibody molecule. Using the conjugates, targeted delivery of the attached antineoplastic amine derivatives of anthracycline antibiotics is achieved in vivo. Such conjugates are thus therapeutically effective against a variety of neoplastic cellular disorders when administered in vivo. Methods for preparing the antibody conjugates and for use of the conjugates in vivo are also disclosed.



European Patent
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PARTIAL EUROPEAN SEARCH REPORT
which under Rule 45 of the European Patent Convention
shall be considered, for the purposes of subsequent
proceedings, as the European search report

Application number

EP 88 40 1353

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	JOURNAL OF CHROMATOGRAPHY, vol. 288, 1984, pages 127-136, Elsevier Science Publishers B.V., Amsterdam, NL; P.A. SCOURIDES et al.: "Application of analytical and semi-preparative high-performance liquid chromatography to anthracyclines and bis-anthracycline derivatives" * Page 127, summary; page 129, figure 2; page 135, lines 1-24 * --	1,2	C 07 H 15/252 A 61 K 31/70 C 07 K 15/00 A 61 K 39/395 A 61 K 47/00
X,D	J. CHEM. SOC., CHEM. COMMUN., 1986, pages 659-661; R.T.C. BROWNLEE et al.: "The synthesis and characterization of a series of bis-intercalating bis-anthracyclines" * Page 660, column 1, compound (6); column 2, lines 1-4 * --	1,2	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			C 07 H 15/00 C 07 K 15/00 A 61 K 47/00 A 61 K 31/00
INCOMPLETE SEARCH			
<p>The Search Division considers that the present European patent application does not comply with the provisions of the European Patent Convention to such an extent that it is not possible to carry out a meaningful search into the state of the art on the basis of some of the claims.</p> <p>Claims searched completely: 1-28 Claims searched incompletely: Claims not searched: 29-31 Reason for the limitation of the search:</p> <p>Method for treatment of human or animal body by surgery or therapy (see Art. 52(4) of the European Patent Convention).</p>			
Place of search THE HAGUE		Date of completion of the search 01-03-1990	Examiner BRENNAN
CATEGORY OF CITED DOCUMENTS		<p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>	
<p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p>			



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	CHEMICAL ABSTRACTS, vol. 87, no. 11, September 12, 1977, page 32-33, abstract no. 78376t, Columbus, Ohio, US; A. GOLDIN et al.: "Antitumor effect of adriamycin in comparison with related drugs, and in combination chemotherapy" & ADRIAMYCIN REV., EORTC INT. SYMP., 2nd 1974 (Pub. 1975), 37-54 * ABSTRACT & FORMULA INDEX 1977-1981, vol. 86-95, pages 16374-16375, C ₂₈ H ₃₃ N ₅ O ₁₀ , Carbonic dihydrazide *	1,2	
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X	US-A-3 957 755 (G. JOLLES) * Column 1, line 6 - column 2, line 56 *	1,2	
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X	BE-A- 869 485 (INSTITUT INTERNATIONAL DE PATHOLOGIE CELLULAIRE) * Claim 1 *	17	
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X,Y	EP-A-0 088 695 (CYTOGEN) * Page 18, table 1; page 19, line 18 - page 22, line 5; page 28, line 1 - page 49, line 20; claims 1-6,10-13,22-30,36-41,45-50,54 *	18-28	
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Y	CHEMICAL ABSTRACTS, vol. 106, no. 2, January 12, 1987, page 280, abstract no. 9420b, Columbus, Ohio, US; & JP-A-61 155 334 (TEIJIN LTD.) 15-07-1986 * Abstract *	18-28	
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Y	CHEMICAL ABSTRACTS, vol. 106, no. 13, March 30, 1987, page 695, abstract no. 102645p, Columbus, Ohio, US; & JP-A-61 254 598 (GREEN CROSS CORP.) 12-11-1986 * Abstract *	18-28	
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